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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/239,426	01/28/1999	FUI-TSENG H. LEE		6073

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FMC CORPORATION
PATENT ADMINISTRATOR
INTELLECTUAL PROPERTY LAW DEPARTMENT
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EXAMINER
CLARDY, S

ART UNIT	PAPER NUMBER
1616	11

DATE MAILED: 05/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/239,426	Lee et al
Examiner	**Art Unit**
S. Mark Clardy	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Mar 19, 2001* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-49* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 9
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claims 1-14 and new claims 15-47 are pending in this reissue of US Patent 5,597,780, filed January 28, 1999; the parent patent issued on January 28, 1997.

Applicants are reminded of the continuing obligation under 37 CFR 1.56 to timely apprise the Office of any litigation information, or other prior or concurrent proceeding, involving Patent No. 5,597,780 , which is material to patentability of the claims under consideration in this reissue application. This obligation rests with each individual associated with the filing and prosecution of this application for reissue. See MPEP §§ 1404, 1442.01 and 1442.04.

The reissue oath/declaration filed on February 22, 2001, is defective because it fails to identify at least one specific error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414 (section II).

Claims 1-47 are rejected as being based upon a defective declaration under 35 U.S.C. 251. See 37 CFR 1.175. The nature of the defect is set forth above.

In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

The original patent has been received.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 8, 15, 16, 19, 22-42, 48, and 49 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The deletion of the antifoaming agent, critical or

essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the specification, the emulsified aqueous phase is disclosed as having an emulsifier, an antifoam agent, and optionally, a xanthan gum viscosity modifier/stabilizer:

> The process of the invention involves the following steps: a) providing an aqueous phase containing an emulsifier, preferably a partially hydrolyzed polyvinyl alcohol; an antifoam agent, and optionally a xanthan gum viscosity modifier/stabilizer; ... (col 1, lines 56-60).

> The aqueous phase will ordinarily contain 0.3 to 3.0, preferably 0.8 to 2.0, weight percent of one or more emulsifiers, e.g., polyvinyl alcohol, 0.05 to 0.20, preferably 0.06 to 0.15, weight percent of the xanthan gum viscosity modifier/stabilizer, if it is used, and 0.01 to 1.0, preferably 0.4 to 0.9, weight percent of the antifoam agent. (col 2, lines 16-21).

Also note that the antifoam agent is present in all examples. The xanthan gum component is optional (as is the method step of pH adjustment), and may thus be deleted from the independent claims; however, in view of the clear teachings of the specification, the antifoaming agent is critical and may not be so deleted. Arguably, the punctuation (i.e., semicolon and comma usage) in claim 1 of the patent could be read as indicating that the antifoam agent is optional:

> 1. A process ... which comprises ... the steps of:
> a) providing an aqueous phase containing 0.3 to 3.0 wt % of one or more emulsifiers; optionally 0.02 to 0.20 wt % of a xanthan gum viscosity modifier/stabilizer, and 0.1 to 1.0 wt % of an antifoam agent; ...

However, such a reading is in clear contradiction to the teachings of the remainder of the specification; thus the optional material (xanthan gum) ends at the comma, and the antifoaming agent is not optional. It would be inappropriate to rely solely on punctuation as justification to delete subject matter when the preponderance of evidence clearly indicates that it is critical material.

discussed above, all of which are critical or essential to the practice of the invention, but not included in the claim, is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Thus, in order to be enabled, the claims must be amended to specify microencapsulated clomazone in a polyurea shell comprising the antifoaming agent and the PVA emulsifier. As applicants stated on page 3 of the response to the first rejection in the parent application,

> Applicants' invention is not simply putting encapsulated clomazone into a conventional aqueous suspension in place of another herbicide. Applicants' invention is finding within the teachings of the prior art a limited class of materials that give formulations of clomazone with significantly reduced volatility, when closely related materials give little or no reduction.

Although applicants have included functional limitations pertaining to reduced volatility, the evidence of record indicates that PVA, the antifoaming agent, the hydrocarbon solvent, and the polyurea shell are each essential parts of the limited class of materials referred to above; all are required for the polyurea encapsulated clomazone compositions to achieve the desired reduction in volatility.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 8, 15-17, and 19-49 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: PVA and the antifoaming agent as noted above.

Claims 1, 8, 15-17 and 19-49 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The absence of polyvinyl alcohol (PVA) from the claims, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). While the specification refers to the utility of emulsifiers in the aqueous phase, "preferably a partially hydrolyzed polyvinyl alcohol" (col 1, line 58, quoted above), it is only PVA that is used throughout the specification in the emulsification step; no other emulsifiers are exemplified, or even suggested. It is noted that the sodium salt of sulfonated naphthalene condensate is disclosed as a post-encapsulation additive, but is not present in the microcapsules (col 11, Table 3, footnote 4). The only comparative evidence of record concerning an emulsifier other than PVA is that in Tables 5a and 7 in which the microencapsulated compositions of Beestman et al (US 4,280,833), using sodium lignosulfonate as emulsifier, are shown to have unacceptable volatility of clomazone. Thus it would appear that PVA is a critical element in the claimed invention and must appear in all claims.

Claims 37-40, 48, and 49 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The absence of a hydrocarbon solvent, in addition to the other materials mentioned above, all of which are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim 37 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The absence of the polyurea as the shell material, in addition to the other materials

Claims 2, 4, 6, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2, 4, and 6 recite the limitation "the antifoam agent". However, since this material has been deleted from claim 1, there is insufficient antecedent basis for this limitation. As indicated above, the antifoam agent must be re-inserted into claim 1.

Claim 28 needs to read: "...wherein the formulation has a 100 mesh wet screen analysis..."

Other suggestions concerning wording are as follows:

In view of the comment that the agitation in the curing step should be "gentle", in contrast to the agitation in the emulsification step (col 2, lines 55-56), it would appear that claim 1, part "e" should be amended to read "... curing the microcapsules by gentle [continuing the] agitation ..."

Claims 37-40 may be clearer if amended to read, for example: "microencapsulated clomazone particle(s) ..." or "microencapsulated clomazone formulation ..."

Two patents filed subsequent to applicants' earliest filing date pertain to related subject matter: Stern et al (US 5,583,090) and its CIP Anderson et al (US 5,783,520), both assigned to Monsanto Co.

Stern et al teaches improvement in volatility of clomazone by microencapsulating the herbicidal agent which is dissolved in a high boiling inert organic solvent, wherein the polymeric shell wall comprises 3-15% wt of the microcapsules. The high boiling point inert solvents are disclosed as being mixtures of mono- and polyalkylated aromatics, "petroleum fluids available from Exxon such

as Aromatic 200, AE700, and Exxate 700", fatty acid methyl esters, with the selected organic solvent having a boiling point above 170°C (paragraph bridging columns 3-4). While the Exxon product Aromatic 200 is the hydrocarbon solvent used in the examples of applicants' patent (5,597,780), it is noted that applicants described it in the Table 1 footnotes as having a flash point of 95°C (col 10, lines 13-14); thus this material appears to be outside the scope of the claims of Stern et al, in which only AE700 was used (an aromatic ester solvent-- i.e., non-hydrocarbon solvent: 1,2-benzenedicarboxylic di (C_{6-8}) branched alkyl ester: col 6, Table 1, footnote 2). In contrast, all of applicants' exemplified compositions used the Aromatic 200 hydrocarbon solvent (col 3).

Anderson et al teaches similar compositions in which the solvent is a high boiling point (above 170°C) edible oil such as soy bean oil, corn oil, sunflower oil, vegetable oil, peanut oil, and canola oil (col 4, lines 7-9).

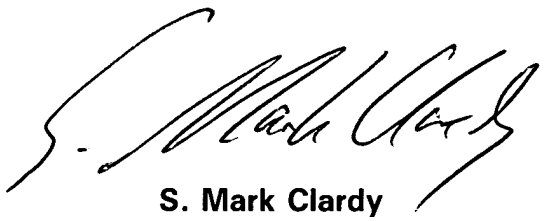
Neither reference discloses the use of an antifoam agent.

Applicants' disclosure and claims do not address solvents with the limitation of having a high boiling point (>170°C) or which are edible.

No claim is allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is (703) 308-4550.



S. Mark Clardy
Primary Examiner
AU 1616

May 9, 2002